

Cost Analysis of the Non-Standardization of Mail Entry Standards, Postal Processes and Operations

Executive Summary:

This report concludes that:

- The potential net benefits for investing in standardization initiatives at all stages of postal processing and delivery could be at least 3 times the savings presently sought by the USPS in its goal to reduce costs by \$5 billion over five years (2002-2007) through implementation of the USPS Transformation Plan.
- Savings of at least \$13.5 billion net over five years would be available through investments that postal managers, suppliers, and other experts believe are available to the USPS with returns on investment that would exceed current required investment thresholds.
- The largest savings targets for additional savings through end-to-end process standardization would include annual savings of \$800 million per year from the core processing functions and \$780 million from the back office delivery functions. Savings in customer service and transportation costs through network consolidation, rationalization and standardization would add another \$2 billion over five years plus associated indirect costs.
- Yet, for the USPS even to achieve its current goal of reducing costs by \$5 billion over five years will be a significant accomplishment that will exceed past experience of the USPS in investing in productivity and cost reduction. Today, the USPS reports that it is on track to achieve this historic performance.
- For the USPS to go further than the current cost reduction goal would require capital for
 investments that has not been available during recent years of financial stress. Even if the
 financial resources were available, the relatively soft analysis of returns from process
 standardization investments can be difficult to justify. More importantly, collaboration would be
 required from stakeholders, some of whom might be impacted by standardization initiatives.
 Stakeholders interests that might be impacted would include those of:
 - Customers
 - Employees
 - Communities and their Representatives in Congress, and
 - Regulators.

Collaboration to achieve standardization cost reduction benefits that would result from such initiatives would represent a sharp departure from past experience but would grant postal management an opportunity to envision future operations in terms of performance and productivity that is generally not thought possible today.

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The President's Commission on the United States Postal Service (President's Commission) requested this study to assist in its consideration of potential recommendations for the future of the USPS. The focus of this study is on sizing the opportunities to standardize processes and to obtain new efficiencies and productivity. The underlying concept is that a "cost" is currently being incurred by the USPS in cases where opportunities exist to make investments offering returns that exceed USPS investment thresholds but where action has not yet been taken. The focus here is on action, the potential benefits to be obtained by acting to eliminate inefficiencies and on the investment costs of taking such actions.

In announcing the Transformation Plan (April 2002), the USPS committed to reduce costs by \$5 billion during the next five years operating under existing legal authorities. Realizing this \$5 billion goal will represent an accomplishment that exceeds past USPS experience. Given the existing constraints placed on postal management and the perception of limitations to action that the existing oversight structure engenders, a \$5 billion dollar cost reduction as opposed to business as usual would be viewed to be a significant achievement. To date the USPS is on track to achieve this goal and is reporting on its progress to the Board of Governors, the Congress and to the public.

The Transformation Plan includes a detailed discussion of Nine "Operational Efficiency Strategies" that involve every aspect of postal operations. Replication of best practices and standardization of operations are tools that support a number of the efficiency strategies. Standardization of processes so that process management tools can be used to improve quality, reduce costs and improve productivity is a concept that has been well established throughout American industry. The USPS itself invested in process management improvements and continues in its commitment to continuous improvement in management of operations. The USPS today regards standardization as an important strategy for reducing costs and improving productivity and makes this commitment in its Transformation Plan. Yet, postal management believes itself to be constrained in its ability to invest in opportunities that exist today.

The cost of not investing is significant. Savings of nearly 3 times the level of the current \$5 billion cost reduction goal (\$13.5 billion over five years) could be achieved with additional investment, management focus and, most importantly, significant new support from postal service stakeholders.

Discussions with postal executives, industry experts, customer representatives, suppliers to the USPS, former postal executives and others confirm the widely shared view that opportunities exist to achieve efficiency benefits through investments in a long list of standardization opportunities. Such investments have been made by other posts (e.g. Canada, Germany's Deutsche Post, the Dutch Post, TPG, Post Denmark) that are, however, not nearly as large as the USPS. Notable successes in standardizing

processes have been achieved by the express delivery companies, UPS and FedEx that are regarded as high performing enterprises.

Analysis of actions that have already been identified in the USPS's Transformation Plan and recommendations made by the Mailing Industry Task Force co-chaired by the USPS, yields a long list of potential investments in standardization of operations at multiple levels in the operating system (see Technical Appendix Table 1). These concepts go beyond mail piece standardization to end-to-end standardization initiatives. These include new standardization of mail preparation, rationalization of the processing network, introduction of new automation to the delivery function and others. Customer centered worksharing has been a traditional mechanism for introducing standard processes into the postal processing system, to introduce new automation equipment and to permit the processes that are required for use of the new machines to shape the internal mail handling processes. But as the Transformation Plan notes, introducing additional islands of automation will have limited additional impact on letter automation and the national flats strategy is well underway. Beyond these specific investments, experts in quality systems, cost reduction and postal management suggest that the greatest savings may lie in two areas (1) the continued introduction of integrated automation to replace manual operations and (2) in creating cost accounting and measurement systems that will permit broader introduction of management metrics to measure performance improvement. Neither strategy can achieve expected results without process standardization throughout the processing delivery systems.

Postal management has been limited in making investments by the capital investment cooling off, if not freeze, of recent years. Some actions that have been justifiable in demonstrating traditional returns have been taken. Less traditional actions (e.g. implementing in information systems to support standardization and process management) have not been taken because of institutional constraints and the perception of constraints that stem from the regulatory process and the historic opposition of stakeholders.

The list of potential actions appearing in the Technical Appendix to this report, has been reviewed with USPS management and other experts. The list is compared with the costs of running the USPS today and conclusions are drawn about potential savings from standardization and the potential investment costs of taking action. For the purpose of sizing the potential savings (i.e. judging how valuable it would be to pursue these sometimes controversial initiatives) the core elements of cost of the USPS are reviewed. This analysis of the potential scale of savings indicates that there are potential savings in excess of \$16.7 billion. Experts interviewed in the process of developing this paper note that the potential savings and costs of attaining them are soft (estimates of the cost of process management, for example). But investments that are primarily in process improvement, management and data would be unlikely to reach the \$3.2 billion over five years that was invested in automation equipment in the 1990s when the letter automation program was completed. Detailed studies (discussed in the Technical Appendix) will have to be completed by the

USPS and others to validate individual opportunities according to the high standards expected of USPS capital investment proposals. This capital investment process that is rigorously enforced by the USPS management and governance process is also summarized. The purpose of this discussion is to note that this effort to size net benefits is only the first step in an ongoing investment and management improvement process.

The question will be asked, why has the USPS not invested in these efficiency opportunities if such significant potential savings exist? The interviews completed for this report highlighted significant implications for USPS stakeholders even if only the initiatives suggested in the Transformation Plan were undertaken.

Customers would be forced to incur costs if new standardized mail preparation standards were imposed. Such regulations might, in some cases be in the interest of the system as a whole. The Mailing Industry Task Force has made recommendations for increased mail preparation standardization. Yet new regulations might impact individual customers differently than others. Standards affecting the mail piece itself are viewed widely as reducing the value of postal services (e.g. resulting in lowered response rates to advertising campaigns, placing creative constraints on communications, introducing customer service limitations etc.). Many experts who have studied the mailing process commented that improved processing efficiency could be achieved by introducing regulations that would make the mail stream more uniform. Among other factors, the automation machinery could be run more efficiently. But many experts commented that in a time of market pressure, negative financial implications would result from actions that would impact on mail volume forcing customers to incur greater costs and eliminating valuable features from the product.

Employees would be impacted by actions to invest in efficiency that would reduce complement. Modifications in work rules that that are generally subject to bargaining agreements would also be seen by employee representatives as impacting employees. Unions and Management Associations representing the employees would be likely to see significant new investments in standardization that would be the basis of new performance management processes as impacting their constituents and will want to have a voice, perhaps in the context of collective bargaining, to discuss actions such as those that are listed here.

Communities in which the 40,000 retail outlets and 350 postal plants and processing facilities are located and their representatives in Congress would be impacted by standardization initiatives that might reduce the numbers of plants as a part of processing and transportation network integration and rationalization of the retail network. There is a widely held belief that such consolidation is needed. Comments submitted to the President's Commission discuss this issue. The Comptroller General has testified before Congress that the process of consolidation would be facilitated by the creation of a process such as the one that has been used by the Department of Defense to make it possible to close military bases. But in the current environment under business as usual, it is exceptionally difficult for postal management to discuss potential consolidations openly. In the past, laws have even been passed to prevent the closing of retail facilities (see the Appropriation Bills). Such actions stand as a caution to postal management that broad action to rationalize the network could be received in a similar manner. Legislative constraints on the ability of postal management to take steps to make the network more productive are commonly regarded as factors limiting efficiency.

Regulators and other overseers would likely regard changes in the service standards that define the goals for the timing of mail delivery within proscribed geographic boundaries as subject to their review. Some customer representatives would encourage this view. The commitment to deliver mail overnight within specific geographic areas is viewed by managers of the postal service today as a regulatory decision. Yet the ability to make adjustments to service standards is a flexibility that could offer productivity benefits and could support standardization initiatives. At the same time, service standards, like regulations affecting the mail piece, are features of the product or service that are quite important to customers. Similarly, the characteristics of the categories of service are regulated and limit the capacity of management to introducing pricing incentives to encourage standardization. Limits on postal management to change to rates defined by shape or to provide pricing incentives to encourage greater efficiency are subject to the regulatory process that has significance for many customers.

This brief review illustrates the fact that while there may be significant new opportunities to invest in new efficiency and cost reduction, the ability of postal management to do so will depend upon the collaborative agreement of stakeholders to change business as usual and to embrace change. Should customers be required to pay more for the service? Should employees face reductions in force? Should work rules be changed to encourage performance management systems? Should communities that prize postal facilities and the jobs that they represent face network consolidation and downsizing? Should regulators permit postal management to adjust services to encourage increased standardization?

The broad consensus that supports the concept of investing in standardization at least in theory has drawn attention to the question of standardizing the mail piece. In Japan handwritten envelopes must conform to standards and the face of the mail piece has boxes for entering the postal code. Senior postal managers and representatives of customers believe that the current freedoms permitted by the USPS are important attributes that are valuable to customers. To understand the incremental cost reductions that might be available through mail piece standardization and the potential costs to future mail volume, there is a need for engineering analysis that has not been done by the USPS or the customers. Specific machine operating standards would have to be specified. The pieces in the current and potential future mailstream that would be affected would have to be identified and potential revenue impacts could be estimated. Discussions with postal executives and mail processing experts noted that this analysis would highlight the point that is the focus of this paper. Analyzing the cost of the non-standard mail pieces will point to a far larger and more comprehensive opportunity in end-to-end process standardization.

In balancing the decisions noted above, the President's Commission should note that the shared belief among many experts is that postal management could process and deliver mail through a far more efficient enterprise if it were granted permission to do so through the collaboration of stakeholders.

The analysis contained in the following technical appendix explains the calculation of the magnitude of the savings and notes that this approach to "sizing the net benefit" is not an engineering study

of the benefits that might be available from initiatives described in the Transformation Plan and in the Recommendations of the Mailing Industry Task Force. The significant value that might be obtained by undertaking more detailed investment analysis should itself be highlighted by this report.

How long would the investments described here take to show benefits? The comments of some suppliers and stakeholders have emphasized the need to shorten the cycle of innovation. Certainly there should be more speed in the process that starts with the identification of potential opportunities (e.g. as in the Transformation Plan) and the realization of savings through investment in increased productivity and reduced costs. To attain stakeholder collaboration and to mount the management offensive needed to tackle end-to-end process standardization would likely require a multi-year build up for the USPS to launch a comprehensive program that delivers reliable results. But to the extent that aspects of the current capital investment analysis process are the mark of prudent management, this study that highlights the widely shared view that there is significant value in pursuing this course should be seen as the first step in a more intensive pursuit of new productivity improvements.

Cost Analysis of the Non-Standardization of Mail Entry Standards and Postal Processes and Operations

Technical Appendix

The President's Commission on the United States Postal Service (President's Commission) requested this summary study to assist in its consideration of potential recommendations for the future of the USPS. The President's Commission determined that an evaluation of the size of efficiency benefits that would be available to the USPS – in particular, the costs associated with the non-standardization of mail entry standards and postal processes and operations – would support its mission. Global Insight¹, an economic consulting firm, has been asked to identify the principal costs associated with non-standardization of mail entry, processing and operations. In other words, in cases where there may be significant opportunities to standardize processes and to obtain new efficiencies and productivity, there is a "cost" being incurred by the USPS. This study is narrowly framed². The focus is on actions, potential benefits to be obtained by acting to eliminate these inefficiencies and the investment costs of taking such actions.

The core of this analysis is contained in three series of tables. **Table 1 A** summarizes the potential actions that might be taken by the Postal Service to obtain cost savings through standardization of postal processes. The concept of encouraging standardization has been discussed many times in recent years³. To identify a list of candidate efficiency options, this report initially focused on the official documents published by the

The Transformation Plan of the USPS published in April 2002 gave prominence to strategies of standardizing operations and implementing performance management techniques in outlining the USPS's eight strategies to improve operational efficiency.

In 2001 the USPS and a number of key customers formed a task force known as the Mailing Industry Task Force co-chaired by Deputy Postmaster General John Nolan and by Chairman of the Board of Pitney Bowes, Michael Critelli.

¹ Global Insight is a Waltham, Massachusetts based firm specializing in economic analysis. Global Insight was created through the integration of two long-time economic research and forecasting companies, the former DRI (Decision Resources) of McGraw Hill and WEFA (Wharton Econometrics) of Thompson.

² Global Insight was specifically directed not to review the many sub-themes that are suggested by the potentially expansive topic of standardization and their implications for the future of the USPS or to discuss the broad public policy implications of reform but instead to focus specifically on the costs and potential net benefits. The President's Commission asked for an analysis that sought the essence of the matter. This summary study suggests additional work that should be completed by the USPS, its suppliers, customers and other parties to identify investment opportunities and the costs and benefits of new investments in efficiency in a manner that is consistent with the high standards for proof and validation normally required of the USPS.

³ The Postmaster General spoke at the National Press Club on April 5, 2002 when the Transformation Plan of the USPS was published. In his speech he stated, "We are completing three straight years of productivity gains, despite a softening of our revenue base. Internally, we have been sharing best practices and deploying uniform standards throughout the country."

USPS (e.g. the Transformation Plan published in April 2002). Interviews were conducted with a wide cross section of experts ⁴ to review these initiatives ⁵ for their reasonableness and their potential value.

Table 1B offers a summary of hypothetical actions drawn from Table 1A that might be taken if the normal parameters that limit investments were removed.

Tables 2 B & C use reports and testimony provided by the USPS to the Postal Rate Commission to identify the costs associated with the parts of the mail processing system that would be impacted by the options suggested in Table 1⁶.

Table 3 A lists the capital investments of the 90s and **Table 3 B** calculates the potential net savings over five years that could be achieved, in the view of experts, if USPS were free from traditional limitations on investments in efficiency.

The final section points out that these calculations are not based upon engineering studies but instead upon the seasoned judgments of customers, suppliers, former postal managers, consultants and others who know the USPS operating system and business. The final section describes the high standards that govern capital investment analysis at the USPS. To "validate" the savings to which this study points will require that the investments described here be considered over time in a similar rigorous manner.

The purpose of this study is to examine the sometimes contentious discussion of standardization, to better understand whether it offers new opportunities to the USPS and to determine where there are returns on investment that warrant further work in the view of experts and those experienced with such investments. European Posts (Deutsche Post, the Dutch Post (TPG), Post Denmark and others⁷) describe major investments that have been made in end-to-end process standardization in recent years. Postal suppliers that manage manufacturing facilities state that they have been able to achieve productivity improvements in of 7% annually in recent years⁸. The productivity improvements in American industry exceeded 4.8 % in 2002⁹. In multiple interviews experts have pointed to process standardization as a central tool in achieving these enhanced levels of productivity.

Based upon these sizing orders of magnitude, the conclusions drawn by this report appear to be modest.

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⁴ There are many experts from the customer organizations, the suppliers of mail processing technology and from the management and employees of the postal service who have studied various aspects of the problem associated with standardization of mail acceptance, processing, transportation and delivery. A representative list of sources whose judgments guided this paper is included following Table 1 A.

⁵ Additional opportunities for savings and actions that might be taken may be suggested by this listing.

⁶ Since potential cost savings have not been identified in previous citations of these options, perhaps for understandable reasons, a mechanism was needed to associate postal costs, potential cost savings and investment costs with potential actions.

⁷ Interviews with managers from the European posts during the annual meeting of the International Postal Corporation and with VP Research of the International Postal Corporation, Mr. Gene Colombo.

⁸ Discussion with Siemens Dematic and with Lockheed Martin Distribution Technologies. Customers such as Donnelly Logistics have also had successful experiences in implementing quality improvement processes.

⁹ Citation of productivity from the Bureau of Labor Statistics, March 2003.

Table 1 A Part 1 Potential Actions To be Taken

Mail Operations	Action	Discussion
Collection ¹⁰	*Standardization of mail pieces entering the system ¹¹ .	*Development of standardized packaging and containerization - Merge multiple products (flats) to the carrier route level - Implement scheme based entry for non-carrier route flats - Collect data on minimum piece requirements 12 *Introducing optimally designed containers that align with USPS Operations - Develop a flat mail container to streamline induction - Set optimum container minimums for presort level and entry point - Modify customer preparation of containers requirements to optimize processing *Align Mail Entry with transportation networks - Provide customers with information about optimal processing locations to facilitate optimum scheduling *Acceptance Process improvement - Optimize the implementation of PostalOne! Process to make the customer payment process more efficient 13

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¹⁰ The four stages of the postal processing system – collection, processing, transportation and delivery – are the common categories that have been used by the USPS (e.g. Transformation Plan p. 24.). The Transformation Plan also includes a different postal process, the customer service process that supports the retail units, among its targets for efficiency improvements.

¹¹ The October 2001 Report of the Mailing Industry Task Force recommended that the industry and the Postal Service collaborate to standardize mail preparation, containerization and entry requirements to drive greater end-to-end system efficiency across classes of mail. This Report did not recommend going as far as the Japan Post has gone to require standardization of the mail piece itself. Such mail piece standardization has frequently been a concern to customers (See comments from the President of Mail.com, Gene del Polito, for example, February 10, 2002, "The USPS and Flats, Putting the Cart Before the Horse").

¹² Mailing Industry Task Force Report (2002) to the US Postal Forum. This report also supported additional efforts as a lower priority (line-of travel benefits, standardized flats labeling, redefinition of the volume/transaction cost threshold for small and large mailings, increasing letter tray minimums to encourage two-foot trays and delivery point sequence barcodes for letters and flats.

¹³ The thrust of this entire list of potential actions to standardize mail preparation and entry that has emerged from the Mailing Industry Task Force (MITF) is focused on the connection between the mailers

Table 1 A part 2 Potential Actions To Be Taken

Mail	Action	Discussion
Operations		
Processing	*Standardization of Operations ¹⁴ *Standardization of Plant Design ¹⁵	*Measuring and Improving performance ¹⁶ *Replicating Best Practices ¹⁷
Transportation	*New information systems are being implemented to - optimize network design - improve transportation efficiencies, and - enhance service 18 and *Broad investments are being made to rationalize the existing network of 350+ plants	*Implementation of - Surface to Air Management System - Transportation Optimization Planning and Scheduling System - Surface Air Support System - Transportation Contract Support System * Integration of Postal Service Systems with the FedEx Information System ¹⁹ * Improved space utilization to eliminate costly annexes * Rationalization of plant network through consolidations to be announced ²⁰
Delivery	*Automation of mail processing operations in backrooms of post offices ²¹ * Standardize best practices ²²	*Operationalize Standardization - Function 4 Review process - National Implementation of Best Practices

and pre-sorters and the technical requirements of the USPS.

¹⁴ Transformation Plan page 31 "Standardization of operations to ensure optimal efficiency throughout the postal network." And on page 32 the Transformation Plan refers to "Improving Performance Management" as Operational Efficiency Strategy #8.

¹⁵ In addition to standardizing operational processes, the design of plants themselves has been standardized in the postal services of other nations. Germany and in Canada, are cited as examples of major plant standardization initiatives. Postal managers will point out that the physical configuration of the plant can make it difficult to design operations that conform to standard processes. When there is wide divergence among plants, as there is throughout the USPS operating system today, efforts to advocate standard processes are confounded. Managers note that when they operated similar plants he was able to achieve his most efficient productivity. The obstacle has not been the willingness of the operating system, but the capital initial investment in engineering that is required and the significant capital investment requirements of replacing plants.

¹⁶ Transformation Plan page 31

¹⁷ Transformation Plan page 32

¹⁸ Transformation Plan page 29

¹⁹ Transformation Plan page 30

²⁰ Transformation Plan page 30

²¹ Transformation Plan p. 31.

Customer	*Use standardization of	*Deploy processing equipment and implement
Service ²³	processes to improve retail and	best practices that standardize operations.
Ser vice	customer service productivity	*Use Point of Sale Data to analyze transactions to
		shift appropriate transactions to alternative
		locations.
		*Implement PARS (address redirection system
		*Review the design of post offices ²⁴).

Table 1 above defines potential actions to standardize mail entry and postal operations in terms of initiatives that were described in the Transformation Plan and in the recommendations of the Mailing Industry Task Force. Many of these initiatives are already being undertaken and the savings that would come from them is generally included in the plans of the USPS to save \$5 billion over the next five years, the goal announced at the time of the publication of the Transformation Plan. But these investments are conceived in terms of the limitations (and practical realities) normally experienced by postal management.

If limitations that management itself may impose and other limits imposed by postal stakeholders were removed, the question might be asked, what actions (from within the agenda already proposed and identifiable in the record) could be taken? **Table 1B** offers a summary of potential hypothetical incremental investments in standardization. This summary was needed to permit discussion of the implications of actions that were identified in **Table 1 A**.

Experts interviewed for the purpose of this report and refining this list of potential actions included among others Mr. John Rapp, SVP, USPS, Mr. Thomas Day, VP USPS, Mr. Paul Vogel, VP, UPSS, Mr. Heribert Stumpf, SiemansDematic, Mr. Gary Jensen, SiemansDematic, Mr. William Dowling, Consultant to SiemansDematic (former USPS officer), Ms. Judy Marks, Lockheed Martin, Mr. Russell Elliott, Lockheed Martin, Mr. David Robinson, Economist, Mr. James Gillula, Economist, Mr. Maynard Benjamin, Envelope Manufacturers Association, Mr. David Rawnsley, Economist, Mr. Michael Crew, Economist Mr. Richard Porras, CSC (former USPS officer), Mr. Allen Kane, Smithsonian (former USPS Officer), Mr. Lawrence Buc, Economist, Mr. Gene Colombo, International Postal Corporation, Mr. KB Pederson, Post Danmark, Mr. John Heinz, AnPost, Mr. Phillippe LeMay, Canada Post. Mr. Charles McBride, Economist (former USPS and Postal Rate Commission), Mr. John Braddock, Six Sigma Qualtec, Mr. Norman Lorentz, OMB (former USPS officer) Mr. William Henderson, Venture Capitalist (former Postmaster General), Mr. Edward Gleiman, Economist (former Chairman of Postal Rate Commission). Papers reviewed for this discussion have included the ongoing writings of industry observers such as Gene Del Polito of Post.Com and comments submitted to the President's Commission by customers (e.g. Mr. John Campanelli of Donnelly Logistics) and suppliers as well as testimony before the President's Commission by postal observers such as Mr. Murray Commorow and representatives of employee groups such as Mr. William Burress and Mr. William Young was reviewed and has played a role in shaping this document. This list is representative of major sources of information in the research process and does not intentionally omit any major sources. Additional comments continue to be welcomed in refining the paper.

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²² Transformation Plan Appendix M-20

²³ Customer Service here is used to refer to the retail process referenced in the Transformation Plan as Efficiency Strategy # 6 on page 29 "Increase Retail and Customer Service Productivity"

²⁴ Transformation Plan p. 32

Table 1 B Standardization Defining Terms: Examples from the Transformation Plan

Process	Initiatives and Proposals	
Preparation, Acceptance and Collection	 Mail Piece/Parcel Standardization Containers Alignment with Transportation Acceptance Process 	 Requiring that pieces entering the USPS meet common standards to improve the efficiency with which automation equipment could handle the letter, flat or parcel. Developing standardized packaging and containerization beginning with flats induction. Developing an interactive information system to improve customer delivery scheduling and optimize plant operations including off-peak scheduling. Develop a standardized internet inductions system to take advantage of initial achievements of Postal One electronic payments
Processing	Processing OperationsPlant Design	 Identifying best practices on national scale and force process standardization in plant operations. Focus on standardizing processes in implementing letter addressing, flats strategy, material handling technologies. Seize opportunities for creating standard plants the
Transportation	• Information Systems	implementation of network integration. Continue implementation of scheduling and information systems to encourage standardized processes for customer interaction, scheduling and facility optimization.
	Space UtilizationPlant Network Rationalization	 Encourage best practice replication and private sector benchmarking in space utilization of transportation facilities and utilization of vehicles. Implement the national infrastructure rationalization in a manner that will support the balance of transportation and processing optimization taking advantage of standardized processes.
Delivery	 Backroom Mail Processing Operations Best Practice Replication 	Continue to implement automation to the delivery function including the next generation of address redirection systems. Take advantage of the best practice replication (noted below) of the customer service function to find back office efficiencies for delivery. Identify new automation investments that increase standardization of the back office functions and support the letter carriers sortation tasks.
Customer Service	Retail ProcessAddressing System	 Implement Transformation Plan directive to standardize operations to ensure network efficiency. National implementation of the standardized office improvement process with emphasis on improving address correction and updating.
	Post Office Design	 Develop and implement standardize facilities designs to improve customer service efficiency (e.g. common designs for 24 hour facilities)

Source: Summarized from Table 1 and discussions and meetings with USPS management

As noted above, the initiatives to encourage standardization that are the focus of this discussion have been identified from the Transformation Plan and the Mailing Industry Task Force recommendations to create a "practical" set of concepts. In a more detailed treatment, additional initiatives could be sought from additional sources. For example, the Mailers Technical Advisory Council, the Universal Postal Union in Bern, Switzerland and the European Union have all completed recent work on the benefits of standardizing postal processes. Further, a canvas of suppliers to the USPS would provide an opportunity to add to the list summarized from the Transformation Plan. The initiatives described above could be made more specific and concepts that may have evolved since that time could be added.

In spite of these opportunities to enhance the potential targets for investing in standardization and productivity, the question here is: would this list yield notable savings?

Cost Savings Targets

For the purpose of this report, the list of initiatives focuses on actions that have been discussed widely. Options discussed here represent a consensus menu of standardization initiatives about which there is limited debate. These initiatives are not "new" in the sense that the have been discussed and even embraced by the USPS. The questions involve the potential cost savings available from implementing a specific initiative and the scope of the investment that might be required to obtain these cost savings benefits. In some cases experts believe that there are large potential savings to be derived from actions that the USPS might take (e.g. network consolidation, plant standardization, systematizing processes) that are noted in the Transformation Plan but are not being implemented on a large scale as national initiatives.

To estimate the potential savings that could be obtained from these initiatives, interviews with customers, suppliers and former postal executives were added to discussions with USPS management. Instead of undertaking engineering estimate of the potential savings from individual investment actions implemented in 350 plants that are processing 207 billion pieces of mail annually before committing to the standardization course, an different approach, one taken when the USPS developed the Blueprint for Progress of 2000, was used. In that case the USPS argued that its focus should be on improving the traditional business by asking what scale of new business would have to be achieved to replace what was already in place? Here the question is asked: how much value would savings have achieve to yield results significantly larger than the current goal? And, would such savings be consistent with the experience that has been achieved elsewhere.

This approach both avoids the costs and the time delays of a bottom up engineering analysis. The question then is, in looking at the USPS cost structure, where would such savings come from? The following section describes the costs of running the USPS. The Cost and Revenue Analysis is a public document presented by the USPS to the Postal Rate Commission. The most recent CRA covering the year 2001 was transmitted May 14, 2002. Costs are either fixed (network) costs or volume variable (or the cost of processing a piece of mail). The ratemaking process allocates to these costs to individual products. One perspective on the USPS is from the point of view of products and services.

Table 2A shows the 2001 revenue by product type.

Table 2 A

Revenue by Product
(in millions)

Products and Services	Revenue	Percentages
1 st Class	\$35.9	55%
Priority	4.9	7
Express	1	2
Periodicals	2.2	3
Standard	15.7	24
Packages	2	3
International	1.8	3
Special Services	2	3
Misc. Adj.	.3	
Total	65.8	100%

Source: 2002 Cost and Revenue Analysis (FY 2001)

The Cost and Revenue Analysis is a document that is submitted to the Postal Rate Commission and has value in this context because it is the most recent public document that provides an official accounting of the revenue by product and service and the costs by labor category (Table 2 B) of the USPS. The CRA is not generally familiar to postal management. A management report such as National Payroll Hours would be more familiar internally. But the allocation of costs to employee category shown in the following Table has the merit of being the most recent official document. In this report the accounting is being used to size the magnitude of costs generally.

Table 2 B
Costs Segment Summary

(Millions)

Cost Segment	Cost	Percentage
Postmasters*	\$1,773	2.7
Supervisors & Tech.	3,617	5.3
Clerks & Mailhandlers*	19,050	28
Clerks (CAG-K Offices)	7	.01
City Delivery Carriers*	13,907	20.7
Vehicle Service Drivers	537	.07
Rural Carriers*	4,566	6.8
Custodial & Maint. Serv.	2,648	3.9
Motor Veh. Serv.	822	1.2
Misc. Oper. Costs	362	.5
Purchased Transport*	5063	7.4
Building Occ.	1585	2.2
Supplies and Services	3,271	4.7
R & D	29	.04
Admin. & Area Ops.	5,948	8.8
Gen. Mgmt. Systems	37	.05
Other Accr'd Expenses	4,323	6.4
Total	\$67,548	

Source: Cost and Revenue Analysis 2002

By examining this overall cost snapshot of the USPS with the knowledge that 80% of the costs are associated with labor, it is possible to drill down into the categories of costs that might be seen as the base of the operating system.

In general, the reduction of costs in the base will permit a similar reduction in costs required to support the base operations. Although it is not a precise rule, in rate cases the general rule of thumb is that there is a 1.6 multiple applied to the core costs to take into account the "piggyback" costs of overhead that rides on the core. In effect, reducing the costs (hours) of Postmasters and clerks, clerks and mailhandlers in the plants, and city and rural letter carriers would result in cost reduction that would have a 1.6 multiple. Attacking purchased transportation is somewhat different (network design, packing, scheduling, contracting, and supervising) than taking hours out of plant operations, the retail facilities and delivery functions.

For the letter carriers the CRA shows that \$3.2 billion of the \$13 billion in annual costs is "in office direct labor". Most of the concepts of increasing the automation of the delivery function relates to taking hours out of this 25% of overall delivery time.

To explore the potential for savings in costs associated with Clerks and Mailhandlers, it is useful to look at the costs of mail processing.

^{*} The core functions

Table 2 C Mail Processing Costs

Cost Pool		
Automated Equipment	1421	
1 BCS	272	
2 CBCS/DBCS	908	
3 OCR	241	
Mechanized, Letters & Flats	1180	
4 FSM	829	
5 FSM 1000	346	
6 LSM, MPLSM	5	
Mechanized, Other	579	
7 Mechanized Parcels	8	
8 SPBS- Non Priority	401	
9 SPBS- Priority	111	
10 Mechanical Sort- Stack Outside	59	
Manual Distribution Operations	2435	
11 Manual Flats	430	
12 Manual Letters	1389	
13 Manual Parcels	78	
14 Manual Priority	246	
15 LDC 15 - RBCS	292	
Allied Operations	3266	
16 Bulk Presort	11	
17 Cancellation & Mail Prep. Meter	311	
18 Opening Unit - BBM	326	
19 Opening Unit - Preferred	735	
20 Platform	1178	
21 Pouching Operations	469	
22 Manual Sort - Sack Outside	190	
23 Air Contract DCS and Incoming	46	
Other Operations	809.2	
24 Business Reply/Postage Due	33	
25 Express	91	
26 Mailgram	0.2	
27 Registry	138	
28 Damaged Parel Rewrap	14	
29 Empty Equipment	38	
30 Misc Activity	160	
30 Mail Processing support	210	
31 International	125	
	1703	
32 LDC 41 - Unit Dist. Auotomated	32	

33 LDC 42- Unit Dist. Mechanized	1	
34 LDC 43- Unit Dist. Manual	639	
35 LDC 44- Post-Offc Box Distr.	154	
36 LDC 48- Cus. Serv./Express	5	
37 LDC 48- Cus. Serv./Other	151	
37 LDC 48- Cus. Serv./Admin.	182	
38 LDC 48- Cus. Serv./Spec. Servc.	112	
39 LDC 49- Computeriz. Fwd Sys	277	
40 LDC 79- Mailing Req' & Bus. M E.	150	
40 LDO 70 Maining 1004 & Das. W. E.	100	
MODS 1 & 2 Mail processing sub	11396	
LDC 45 - Window Service	766	
Claims & Inquiries	21	
Administrative Svcs/Other	832	
Total Mods 1 & 2 Facilities	13015	
41 Platform	222.6	
42 Allied Labor & all other Mail Proc.	280	
43 Parcel Sorting Machine	85	
44 Sack Sorting Machine	38	
_	30 81	
45 SPBS & Irreg. Parcels		
46 Non-Machinable Outside	46 75 4	
BMCs Mail Processing Sub	754	
Window Serv	0.3	
Claims & Inquiries	1	
Admin Services	95	
Total For BMC Facilities	850	
NON MODS GROUP		
Allied	706	
Automated/Mechanized	186	
Express Mail	25	
Manual Flat	585	
Manual Letter	780	
Manual Parcel	185	
Registry	49	
Miscellaneous	308	
Non-Mods Mail Proc. Subtotal	2844	
Tion mode man i 100. Gablotai	20 TT	
Window Service	1400	
Claims and Inquiries	14	
Ciaimo ana maamoo	I T	

Administrative Services	576	
Total for Non-MODS Facilities	4834	
C/S 3.4 Clerk Messengers	48	
TOTAL CLERK/MAILHANDLER COSTS	18746	

Source: Direct testimony of Elaine Van-Ty-Smith, USPSt-13, R2001-1, Table 1

Table 2 C takes the entire \$18.7 billion in mail processing costs associated with Clerks and Mailhandlers costs and breaks it down by type of plant. The large plants, the MODS 1 & 2 plants and the Bulk Mail Centers, contain significant costs (according to the USPS witness in a recent rate case) that are associated with allied operations and manual processing.

A summary of the implications of this testimony might be seen in the following table:

Table 2 D

Zeroing in on the Manual and Allied Costs of
Mail Processing
(Millions)

Type Of Plant	MODS 1 & 2 (Large)	BMC (Bulk)	NON-MODS GROUP (Smaller)
Automated Costs	3180	123	186
Manual & Allied	7404	629.6	2638
Other	809.2	96.3	1990
Total	11393.2	848.9	4814

Source: Summary of Table 2 C processing costs from the USPS testimony

The purpose of summarizing these processing cost numbers in general terms is not to make a costing point in the way that it might be argued in a rate case. Here the purpose is only to illustrate the size of the opportunity for process standardization that could to take costs out of the existing processing system where the costs of manual and allied costs is \$10.7 billion dollars per year (FY 2001) of \$67 billion total.

The biggest savings opportunities for the USPS today involve investment in actions that private manufacturers have found to yield significant savings – standardization of processes, introduction of systems to measure performance and application of performance management tools to take costs out of the processing system. Additionally, network consolidations in the processing network, the retail network and rationalization of the new system with national customer networks offer another, difficult to measure, source of large savings opportunities. Finally, the 25% of delivery costs (\$3 billion) associated with back office processing near the delivery point offers another major opportunity for taking costs out of the existing system.

The problem for postal management is that the benefits of these investments are difficult to pin down in traditional terms that have been applied to buying machines that permit labor savings improvements. Further, the institutional investments that stand in the path of standardizing processes are formidable. New costs that must be borne by customers, elimination of plants or reduction in jobs are all controversial

actions. To address the significant manual and allied costs, the delivery back office time and the customer service process much less the scope of the network, will require unprecedented stakeholder collaboration.

But assuming that such a cooperative initiative could be envisioned, this discussion leads to the question: how plausible would it be to imagine cost reductions that were on a scale that compared with the achievements of high performing organizations in the private sector. Major suppliers to the Postal Service such as Siemens Dematic have set benchmarks for their own operations that expect cost reductions of 7% per year from cost reductions resulting from process improvements. Similarly manufacturers of equipment such as Lockheed Martin would note similar successes in reducing manufacturing costs through process management improvements. These suppliers and others have noted their experience in the comments that they have submitted to the President's Commission. The national non-farm productivity improvement of 2002 of 4.8% offers another such benchmark ²⁵. In making an assessment of the scale of cost reduction that could be possible and expected of a large scale processing system, experts interviewed for this report indicated that 5% savings would be considered modest.

The serious question is whether, if there were collaboration from the stakeholders (customers, employees, communities and regulators) could postal management and the suppliers of automation equipment and services take costs out of a reconfigured network that reached the scale expected of high performing enterprises in the private sector?

Such a reduction would be equal to \$67 billion x 4.8% or 3.2 billion. Looking at the base costs of running the USPS (taking out the associated indirect costs of 1.6 times the base) this scale of reduction would require a \$2 billion per year reduction from the core cost categories outlined above – purchased transportation, customer service, delivery and processing.

If purchased transportation could be reduced 5% through network consolidation, scheduling improvements and implementation of a series of initiatives that the postal service is undertaking already but will have difficulty in implementing without substantial new stakeholder collaboration savings would equal \$250 million. If customer service (postmasters and clerks) costs could be reduced by 5% through rationalization of the retail network and standardization of operations as indicated in the Transformation Plan this would be an additional cost reduction of \$207 million.

The question then focuses on whether the nearly \$18 billion in processing costs and the delivery function costs of \$18 billion (from the 2002 CRA) could be reduced by \$800 million each. Such a reduction (of 4.4% would actually be less than the 4.8% annual productivity improvement that was experienced in 2002. The question then is whether there are targets in the \$18 billion of processing costs that could make a process standardization program feasible. Experts in mail processing and quality improvement processes believe that savings of many times this level are possible. The analysis here seeks to zero in on the core costs of running the postal service to see where such targets might exist and what is their size?

The traditional question in addressing investment issues of this nature is how much of the investments were already planned and represent investments that are underway and how much would be new? The Transformation Plan listed investments that were contained in Decision Analysis Reports. While the Annual Report of the USPS outlines the way in which capital shortages have limited deployment of approved capital investments in recent years, the Transformation Plan did outline projected savings from mail processing that would constitute substantial cost reductions.

to make a productivity calculation that might be applied to the USPS but to identify a level of cost reduction that will permit asking a hypothetical question.

²⁵ During the debate over postal reform there was extensive discussion of whether non-farm productivity was the appropriate metric to apply to the USPS or whether multi-factor productivity, a measure that would take capital investment into account would be more appropriate. Additionally, a 4.8% improvement in non-farm productivity announced in March by the Bureau of Labor Statistics is a different concept from cost reductions that might be obtained through standardization process improvement. The point here is not

To recognize these savings will require substantial cooperation from stakeholders. Moreover, to go beyond this level, will require unprecedented collaboration and investments such as those involving network rationalization that would likely be quite controversial.

Table 2 E

Planned Investments and Savings from Automation
Described in the Transformation Plan

Actions	Costs	Benefits	Discussion
Processing	\$14.3 billion of	*Phase 1 of address	These work hour
* Implementation of	personnel costs and	redirection is estimated	savings that are
Address Redirection technology ²⁶	benefits are associated	to save 2.4 million	projected for the
technology	with the processing function	workhours, phase 2.5	next phase of
	Tunction	*Flat Sorting	automation
*Automation of Flats		automation will have	equipment would
		saved 15.9 million work	add up to 21.6
		hours when fully	million work hours
		implemented * Automated Tray	or more than 10,000
*Implement material		Handling system will	full time equivalent
handling		save more than .8	employees. The
		million work hours	benefits associated
		when implemented	with these
		* Implementation of	investments are
		remote flat encoding and Low Cost Tray Sorters	therefore estimated
		and universal Tray	to be nearly \$650
		Systems are not given	million.
		specific Savings	mmion.
		estimates but will	
		improve efficiency	

Source: The USPS Transformation Plan Appendix M

Table 2 E is no longer a complete list. Today the list of actions that are being taken by the postal service to achieve the \$5 billion cost reduction target has become a longer list that is tracked internally. The point is that there are lists of actions that are already underway and in reaching for additional savings care should be taken not to double count. For the purpose of this discussion its assumed that customer-employee-community and regulator collaboration could attain very significant savings over 5 years of which the USPS is likely to attain one third under current conditions.

Even taking into account the list of actions that are not yet reported and are contemplated, the fundamental point remains – the investments in end-to-end standardization are soft. They are more difficult to specify than buying a piece of equipment. Savings are uncertain before the fact. Private firms can document their success with such programs. The potential savings for the USPS are very large and the current perception

 26 Savings are already included in the USPS planning. See Transformation Plan Appendix page M-3

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of experienced postal mangers is that significant institutional obstacles block them from realizing similar success.

Investment and Timing

The controversy that could be engendered among stakeholders by the next round of investment will raise the question of investment costs. How much would it cost the USPS to obtain the benefits associated with the scope of cost reduction discussed here?

The barriers to implementation make it clear that the savings will not be available in year 1. Additionally, the complexity of the implementation path will make it difficult for USPS management to make precise estimates.

For the purpose of sizing, however, its useful to note that many of the investments suggested in the Transformation Plan and outlined in the first tables are not measured in hardware costs. They are the cost of creating software systems, for implementing process management and financial control systems. For perspective it is useful to look at the past decade of investment in automation equipment.

Table 3 A USPS Capital Investment History

(Prepared by SLS Consulting from USPS Data)

USPS CAPITAL INVESTMENT DATA

source: USPS Summary Financial and Operating Statements.

Source: **USPS Annual Reports.

(\$ millions)

ACTUAL CAPITAL INVESTMENT EXPENDITURES (CASH OUTLAYS)

		Detail						
Posta I Fiscal Year	Actual Capital Expenditures	: Total	Construction and Building Purchase		Mail Processing Equipment		Customer Service Equipment	Postal Support Equipme nt
1993	1,678.2	1,678.2	471.0	205.6	516.2	347.7	2.8	134.9
1994	1,654.7	1,654.7	307.2	321.7	435.3	301.2	69.2	220.1
1995	1,803.4	1,803.4	507.9	488.1	390.2	104.9	39.9	272.4
1996	2,295.9	2,295.9	627.7	510.1	778.5	33.5	6.3	339.8
1997	3,074.9	3,074.9	684.6	576.6	1,130.9	260.6	31.8	390.4
1998	2,949.5	2,949.5	917.9	610.3	728.3	150.1	101.9	441.0
1999	3,624.1	3,624.1	978.3	696.5	934.1	74.3	241.1	699.8
2000	3,169.4	3,169.4	860.6	639.2	789.4	241.4	235.2	403.6
2001	2,803.9	2,804.0	587.0	452.1	900.2	284.7	218.9	361.1
Avera								
ge	2,561.6	2,561.6	660.2	500.0	733.7	199.8	105.2	362.6
Total	23,054.0	23,054.1	5,942.2	4,500.2	6,603.1	1,798.4	947.1	3,263.1

This table gives some perspective to the question of the potential cost of capital investments standardization. There are some investments discussed in the Transformation Plan for which there is little potential for making accurate cost estimates without going through the process of costing the development and implementation plan with suppliers in a competitive market on a facility by facility basis. An example of these difficult to cost investments is seen in the entire field of process standardization. The firms that have developed experience in implementing such large scale process improvement systems would have to estimate the cost of creating an information system including hardware and software development.

Firms that have experience with this field and can make accurate projections however, would be likely to offer a different business model in a competitive marketplace. In theory there is significant opportunity for the USPS to contract with suppliers on a "shared savings" basis were it not for the significant institutional obstacles to writing such contracts. Realistically, could the savings be shared if there was a perception that even if the savings were identified, there would be limitations on the USPS to remove such cost savings from the system?

The question of how to "cost" the investments in standardization initiatives is not insubstantial. One way to consider the issue is to look at the investments that have been made in automation for the past decade. The \$6.6 billion in mail processing equipment shown above that would be considered in terms of costs amortized over the life of the investments, is clearly in excess of the costs of process standardization, even if the USPS were to fund the entire cost of process improvement without incentive contracting.

Table 3 B Net Savings (\$ Millions)

Year ²⁷	1	2	3	4	5	Sum
Savings	\$3.179	3.258	3.340	3.423	3.509	16.709
Costs ²⁸	.516	.435	.390	.778	.1.131	3.249
Net Benefit	2.663	2.824	2.950	2.645	2.378	\$13.460

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²⁷ The cycle of innovation that is referred to in other parts of this document suggests that a national program to standardize processes and to implement process management would require several years of preparation. Year 1 should not be assumed to be 2003. Actual expenditures are used instead of amortized capital investment costs to replicate the expense versus capital investment treatment that would be experienced with a national roll out of a process management investment.

²⁸ These numbers are taken from the '93-'97 automation investment not counting the special acceleration of investment that took place in 1997. The point that they make is that an investment in process management implementation at all stages will not require the costs associated with buying equipment on the scale experienced during the 1990s. To see the scale of savings that would be required to implement a program that would deliver less than 5% of postal costs as discussed above, these capital investment costs are used for the purpose of sizing.

One of the limits on the speed with which savings can be realized is the cycle of innovation. Interviews with postal managers and suppliers indicate that there can be a 5-7 year investment cycle that stretches from initial concept to national deployment.

The value of potential investments in standardization may not be realized for a number of years in cases where the basis for the initiatives requires fundamentally new concepts (such as the concept of a postal delivery package). In cases where the basis for the initiative is already well established (e.g. the broader installation of existing automation equipment) the cycle from concept to results may be shorter.

Next Steps

The current process that the USPS uses to validate capital investments was established in the early nineties with the dramatic increase in investments in automation. Ultimately, the capital investment in automation exceeded \$5 billion and has left a formal decision review process as a legacy. The USPS requires that for a capital investment of significance, a Decision Analysis Report (DAR) must be prepared by the responsible USPS officer for presentation to the Capital Projects Committee that is Chaired by the Chief Financial Officer. Before the presentation of the DAR, the Finance Department validates the potential savings. In some cases, the Inspection Service and/or the Inspector General of the USPS has been involved in supporting this validation analysis. After a formal vote on capital projects is taken in the Capital Projects Committee, approved investments are presented to the Postmaster General. With the approval of the Postmaster General investments are presented to the Board of Governors Capital Projects Committee for review before being presented to the Board of Governors.

The formal standards for proposing capital investment decisions at the USPS would require that the investments in standardization discussed here be tested. Additional, research from the USPS, its suppliers of technology and from customers would be needed to validate the potential savings. To some, this process may seem cumbersome and slow. To others the process is a prudent and deliberate one through which public officials charged with investing billions of dollars of public financial resources must proceed. In considering next steps, consideration will no doubt be given to accelerating this investment process. Consideration should also be given to the role that the private sector can play.

One of the notable contributions of the Transformation Plan and the Mailing Industry Task Force has been the evolution of thinking to embrace the concept of a mailing industry view as opposed to a view that focused on the USPS and its processing network alone. Today there is more than \$15 billion of worksharing to supplement the USPS network performed by a mailing industry that is often noted comprises \$900 billion in revenue. The effort to bring new standardization to the USPS system to capture opportunities to reduce costs and improve service will also have to be framed in such an industry-wide perspective. New standardization will impact postal customers and contribute to creating or undermining the value that they find in the postal system. Some new opportunities to attain network cost reduction goals may be found in new worksharing, outsourcing and public-private partnership.